

U.S. Antarctic Marine Living Resources Program

2012-2013 Weekly Field Reports

Cape Shirreff, Livingston Island

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Science Report

Seabirds

1. The gentoo penguin colonies are still 70% under snow. Despite the high snow coverage on their colonies, 82% of our reproductive study gentoos have initiated clutches. 36% of them have two eggs and 4% have already failed. 91% of the chinstrap penguins in the reproductive study have initiated clutches. 68% have completed clutches, 21% have only one egg, 2% have three eggs and 8% have not laid. Only 1% of chinstrap penguin nests in the study have lost eggs.
2. We have continued to resight known-aged penguins. Twenty-one known-aged gentoo penguins initiated clutches, 43% have complete clutches and 2% of these nests have failed. There are 43 known-aged chinstraps currently breeding; 60% have complete clutches and 16% have failed.
3. On 27 November we resighted a known-aged gentoo that was banded at Copacabana on King George Island in 2011-2012.
4. Peak clutch initiation date for chinstraps occurred on 26 November. On 27 November we weighed a sample of adult chinstraps at peak clutch initiation along with measuring their first egg. These data await analysis.
5. Many brown skuas have begun building nest bowls and the first and only egg so far was observed on 1 December. We are still seeing disputes over feeding territories.
6. There are currently 25 active gull nests on the Cape.

Pinnipeds

7. At the last phocid census of the Cape we had a 21% increase in elephant seals as more and more juveniles arrive to molt. Weddell seal numbers were up substantially over the previous week. Last week we recorded 31 and this week we had a total of 55 including 5 pups. We saw one leopard seal and no crabeater seals.
8. The one leopard seal hauled out at the Cape was a very small male observed for two days. Photos were taken for our leopard seal photo ID archive.



9. At the last census of fur seal study beaches on 1 Dec we recorded a total of 196 pups (192 live and 4 cumulative dead). This is a ~7.5% fewer pups than for the same date last year. Total pup production estimates, however, will not be finalized until early January after all pups are born.
10. We began perinatal fur seal captures for attendance and foraging behavior on 28 November. As of 2 December we have completed seven captures of females that now have VHF radio transmitters for CCAMLR trip duration protocol. All females have been captured within 0-1 days postpartum. These females and their pups will also be used for inter-annual comparisons of arrival and pup mass indices.
11. Our VHF receiving stations (2) are recording and we downloaded our first data from them. Thus far no females we have instrumented have departed for a first trip to sea.
12. We have recovered eight over-winter geolocating light-temperature archival tags (Nano-LAT). So far we have had 28.8% GLS-instrumented animals return to the Cape.
13. Thus far only 31.7% (52/164) of our tagged female population have returned to Cape Shirreff.
14. A tagged yearling elephant seal returned to the Cape this week.

Weather

15. This week has been dominated by unusually cold, brisk clear and partly sunny weather with intermittent snow squalls. Mean wind speed was 11.4 mph with maximum wind gust of 37.0mph. Winds were mostly from the west and south. Our temperatures have averaged below 0°C since our arrival. This was the fourth week of below zero mean weekly temperature (-0.4°C). The high temperature for the week was 7.8°C and the low was -3.8°C . Total precipitation this week was 0.03 inches. Sunrise and sunset are now 03:09 and 22:29. Mean daily solar radiation this week was 16,447 watts per sq. meter.

Camp

16. This week's weather has been mostly sunny and dry. Penguin and pinniped biologists have been taking advantage of the fantastic conditions. However, we did experience one western snow storm during the night that brought an accumulation of snow.
17. The camp dug out the last remaining capture box and is ready for the upcoming peak of perinatal captures
18. We have not seen any ships and have only a one large horseshoe-shaped iceberg within sight of camp. The Cape is still mostly covered in snow.



19. The produce is continuing to do very well. This is attributed to the ideal conditions in the refrigerator temperatures and our 'Extra Life' vegetable discs, which slow down the process of natural decomposition process.
20. We are on our third barrel of water. We dug out three additional barrels of water and set them up near the entrance to the main hut, where they are expected to thaw faster from the additional heat generated from the sun shining on the exterior wall of the main hut..
21. Christmas decorations have been set up in Cape Shirreff. Presents have gloriously snuggled their way under the official Cape Shirreff Christmas tree. After having palpated the wrapping paper of one of the presents, it is most-likely a Pez dispenser.



Presented by Mike Goebel and Nicole Cook, with assistance from Jay Wright, Melany Zimmerman, Michelle Goh, and David Vejar at the Cape Shirreff Field Camp, Livingston Island, South Shetland Islands, Antarctica

